(Des-Gly10,D-Ala6,Pro-NHEt9)-LHRH

Cat. No.:	HY-P0048
CAS No.:	52435-06-0
Molecular Formula:	$C_{56}H_{78}N_{16}O_{12}$
Molecular Weight:	1167.32
Sequence:	{Pyr}-His-Trp-Ser-Tyr-{d-Ala}-Leu-Arg-Pro-NHEt
Sequence Shortening:	{Pyr}-HWSY-{d-Ala}-LRP-NHEt
Target:	GnRH Receptor
Pathway:	GPCR/G Protein
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description	(Des-Gly10,D-Ala6,Pro-NHEt9)-LHRH (Surfagon, Mwt 1167.34 Da) is an agonist of gonadotropin-releasing hormone (GnRH). (Des-Gly10,D-Ala6,Pro-NHEt9)-LHRH can be used as an internal standard for the LC-MS analysis of leuprorelide acetate. (Des-Gly10,D-Ala6,Pro-NHEt9)-LHRH has potential applications in biochemical analysis and fertility[1][2][3].
In Vitro	(Des-Gly10, D-Ala6, Pro-NHEt9)-LHRH as internal standard for leuprorelin acetate[1] (1) Add 10 µL 200 ng/mL (Des-Gly10,D-Ala6,Pro-NHEt9)-LHRH solution to 100 µL plasma sample. (2) Add ice-cold acetonitrile to solution in (1) in two batches (500 µL each time). (3) Stir at 2500 rpm for 10 min. (4) Centrifugation at 12500 rpm (4℃) for 10min. (5) Transfer the supernatant into a centrifuge tube, dried under nitrogen gas at 35℃, and finally add 100 µL 0.1% formic acid in water/acetonitrile: 90/10 (v/v) solution. (6) The Thermo Scientific Vanquish UPLC system is connected to the Thermo Scientific Orbitrap Explorer 480 mass spectrometer. Using the Waters Acquity UPLC HSS T3 column (2.1 × 100 mm, 1.8 µm) separation at a temperature of 40℃. (7) The mobile phase A is 0.1% formic acid in water, and the mobile phase B is 0.1% formic acid in acetonitrile solution. The gradient starts at 95% mobile phase A, decreases to 10% over 5 min, and then remains constant for 0.5 min. At 6 min, the column returned to 95% mobile phase A and is rebalanced for 2 min. The flow rate was 0.3 mL/min and the injection volume is 20 µL. (8) The sample is ionized by 3500V electric spray. In positive-ion mode, m/z 605.3275 is leuprolide acetate, and m/z 584.3052 is the internal standard. Data are analyzed by Xcalibur software (version 4.4). MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	(Des-Gly10,D-Ala6,Pro-NHEt9)-LHRH (2 µg/kg; i.p.; single dose) significantly increases anxiety behavior in adult male rats with and without gonadectomy[2]. (Des-Gly10,D-Ala6,Pro-NHEt9)-LHRH (50 µg; single dose) improves the fertility of cows after fertilization and prevents embryo death when combined with Ainil (30 µL/kg)[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Chem Biol. 2022 Aug 17;S2451-9456(22)00277-X.

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REFERENCES

[1]. Wan B, et al. Polymer source affects in vitro-in vivo correlation of leuprolide acetate PLGA microspheres. Int J Pharm. 2022 Sep 25;625:122032.

[2]. Masalova OO, et al. Effect of Surfagon on Open Field and Elevated Plus Maze Behavior of Gonadectomized and Non-Gonadectomized Male Rats. Bull Exp Biol Med. 2019 Nov;168(1):52-54.

[3]. Kraevskiy A Y, et al. Surfagon and Ketaprofen for increasing fertility and preventing embryonic death in cows after insemination AY[J]. Ukrainian Journal of Ecology, 2020, 10(4): 159-164.

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